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REVIEW ARTICLE

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Child maltreatment and neglect in the United Arab Emirates and relationship with low self-esteem and symptoms of depression

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ABSTRACT

Objectives: To our knowledge, this study is the first in the United Arab Emirates (UAE) to investigate the prevalence of child maltreatment in relation to depressive symptoms and self-esteem.
Study design: Exposure to physical maltreatment, emotional abuse and neglect was evaluated in 518 adolescents (86% response rate) randomly selected from schools in Al Ain in the Emirate of Abu Dhabi. The Rosenberg self-esteem scale and the Beck Depression Inventory were used to measure self-esteem and depressive symptoms by using multivariate logistic regression analyses.
Results: The mean age of study participants was 14.3 years. Emotional abuse was the most frequent form of maltreatment (33.9%), physical abuse (12.6%) and neglect (12.1%) followed. Male sex was a positive predictor of physical abuse (OR = 2.12; 95% CI 1.18–3.77), whilst higher maternal level of education was protective (OR = 0.40; 95% CI 0.19–0.86). Daily screen time (OR = 2.77; 95% CI 1.17–6.56) and tobacco smoking (OR = 1.86; 95% CI 1.09–3.18) positively predicted emotional abuse. Emotionally maltreated and neglected participants were less likely to report high level of self-esteem and more likely to report symptoms of depression.
Conclusions: Child maltreatment in the UAE is of a similar magnitude to what reported in other countries around the world and significantly associated with low self-esteem and depressive symptoms.

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Introduction

Child maltreatment is defined as all forms of physical and/or emotional ill-treatment including sexual abuse, neglect and any forms of exploitation perpetrated against a person under 18 years of age (World Health Organization, 1999). Childhood and adolescence are critical times during human development whilst the family provides the foundation within which children grow and develop (Morris et al., 2007). Childhood exposure to maltreatment is linked to high rates of educational failure, development of substance abuse disorders, engagement in abusive relationship (Bair-Merrit et al., 2013; Krug et al., 2002; Zuckerman et al., 1995), an increased risk of pervasive antisocial behaviour and diminished self-esteem (Degli Esposti et al., 2020). Self-esteem and resilience play an important role when individuals are faced with life adversity and are important determinants of adolescent mental health (Liu et al., 2015) with protective effects in reducing the onset and manifestation of depressive symptoms (Ju and Lee, 2018).

Population surveys suggest that globally, up to 1 billion of children aged 2–17 years, experience physical, sexual, and emotional violence or neglect in any given year (Hillis et al., 2016). In economically developed countries, where infectious disease related deaths

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have declined due to early diagnosis, use of antibiotics and vaccinations, child maltreatment is a substantial contributor to child mortality (Hillis et al., 2016). This observation stems from population-based studies which have reported an association between child maltreatment and an increased risk of long-term mental disorders and physical conditions such as cardiovascular disease contributing to premature death (Chandan et al., 2019; 2020; Edwards et al., 2003; Gilbert et al., 2009; Soares et al., 2020).

The Arab region, with a total population of 425 million has one of the largest proportions of young people (60%) aged less than 25 years. Mental disorders are a leading cause of disability in the Arab region, yet Arab countries produce only 1.0% of the global peer-reviewed publications in mental health (Maalouf et al., 2019). Historically, there is evidence of child maltreatment cases in the Arab peninsula since the late 80 s, largely ignored, tolerated or accepted as a form of discipline (Al-Mahroos, 2007). The United Arab Emirates (UAE) is a high-income country, where awareness regarding maltreatment of children is growing with reports of case studies on child abuse and neglect (Sachdeva, 2019). This awareness has led to a global campaign among health care professionals and policy makers resulting in the creation of a new Child Protection Law in the UAE, termed the 'Wadeema Law' in June 2016 (Al Abdouli et al., 2017, Al Hajeri et al., 2018).

Nevertheless, there is currently no population-based epidemiological data available in the UAE to inform about the prevalence, distribution, and determinants of child maltreatment. The aim of this study was to contribute to this process by determining the prevalence of maltreatment of children at school level in a cross-sectional survey of children and adolescents aged 12–18 years, in Al Ain, the second largest city of the emirate of Abu Dhabi in the UAE.

The work attempts to systematically characterise the prevalence of child maltreatment in the UAE, a young country with an increasing conscience about this pressing issue. This type of epidemiological work is essential to inform a coordinated prevention program and guide efforts in the region by creating specifically tailored impactful interventions.

Methods

Study design and procedures

This study employed a cross-sectional design to capture the prevalence of child maltreatment and adopted the 'Strengthening the Reporting of Observational Studies in Epidemiology' (STROBE) guidelines for reporting observational studies. The work was conducted in Al Ain, a fertile oasis city located in the Abu Dhabi Emirate, about 160 km east of the capital, Abu Dhabi. Abu Dhabi with 2.9 million people is the largest and most populous of the seven emirates that make up the UAE, including the largest group of UAE nationals in one single location (23%) (Abu Dhabi Statistics Centre, Abu Dhabi, n.d.). In the UAE, primary and secondary education is compulsory for all children from age 5 to 18, for both UAE nationals and expatriates.

In view of language and socio-cultural differences, primary and secondary education tend to be organised in (a) governmental or public schools primarily designed to cater for UAE nationals, and (b) schools suited for expatriates' children. We adopted a two-stage cluster sample design so that at the first stage schools were selected with a probability proportional to the enrolment size and at the second stage, classes were randomly selected to ensure that eligible students fulfilled enrolment criteria.

To estimate the size of the sample, the formula for binomial distribution was adopted [$n = {}^{z}z\alpha^2\ p\ (1 - p)/d^2$]. The calculation estimated 39.4% prevalence of the primary outcome of interest, based on UAE data on physical violence (Alshareef et al., 2005), and suggested a minimum sample of 500 participants (95% CI, $z\alpha = 1.96$, $p = 0.05$, 80% power). We however opted for a more conservative sample size and targeted 600 respondents to maximise the chance of an inclusive and representative group and minimise the possibility of sampling bias. A multi-staged sampling technique was adopted to randomly select four schools from a sampling frame of 111 schools in Al Ain, Abu Dhabi Emirates of UAE in 2015.

The study protocol was approved by the United Arab Emirates University Medical District Human Research Ethics Committee. Additional approval was obtained from the Abu Dhabi Education Council's Research Committee that overlooks research conducted in educational organisations in the emirate of Abu Dhabi.

Inclusion criteria

To take part in the study, boys and girls aged between 12 and 18 years with no major medical conditions, had to reside in Al Ain and consent to the study. An information sheet describing the study in detail was made available, with the help of participating school administrations, to prospective participants and their parents. Participants aged 17 years or older could sign

the informed consent once familiar with study procedures. Those aged 12–17 years required ascent and parental informed consent for participating.

Measures

Socio-demographic variables. We developed a self-administered questionnaire, both in English and Arabic, which was pilot tested for feasibility ($n = 30$) prior to study commencement. This tool, which was self-administered to participants, collected information about socio-demographic variables including age, school grade, type of school (public or private), nationality, monthly income of family, parents level of education, and their marital status, participants' dietary habits, cigarette smoking and time spent watching screens.

Occurrence of maltreatment was the primary outcome of interest. The prevalence of child maltreatment was assessed by using 'The Child Maltreatment History Self-Report', a self-administered questionnaire which assesses history of child physical, emotional and sexual abuse in the previous 12 months (MacMillan et al., 1997). Questions inherent to sexual abuse and suicidal ideation were excluded because Abu Dhabi Education Council felt these questions might impinge on local cultural sensitivities. Questions covering physical abuse included items such as: 'being pushed', 'grabbed', 'shoved', 'slapped', 'spanked', 'kicked', 'bit', 'punched', 'hit with an object' and 'choked'. Emotional abuse questions included: 'verbal abuse' and 'threats of maltreatment'. Emotional neglect questions included: 'emotional feeling of being cared for, loved, and feeling comfortable' 'provision of food, clothes and medical care' (MacMillan et al., 1997).

Prevalence of symptoms of depression. Symptoms of depression were evaluated with the 21-item Beck Depression Inventory (BDI-II), one of the most used scales in epidemiological studies to measure depressive symptomatology. The scale includes the nine symptoms listed in the Diagnostic and Statistical Manual of Mental Disorders for the diagnosis of a major depressive episode (American Psychiatric Association, 2013; Beck et al., 1996).

Each BDI-II question is evaluated on a 0–3 Likert scale according to the previous 7 days. The total score of the BDI-II ranges from 0 to 63 with a high internal consistency ($\alpha = 0.89$) (American Psychiatric Association, 2013). Conventionally, a BDI-II index score of <14 suggests absence of depressive symptoms. Severity of depressive symptoms range from mild (14–19), to moderate (20–28) and severe (29–63). We used an index score of ≥ 14 to indicate positive symptoms of depression. This scale has been validated in 18 Arabic speaking countries including the UAE (Alansar, 2006). The BDI-II scale has a sensitivity of 96% and specificity of 63% at a cut-off score of ≥ 18 (Naja et al., 2019).

Rosenberg self-esteem scale. The 'Rosenberg self-esteem scale' is a 10-item scale utilised to measures self-esteem with a high level of reliability and internal consistency ($\alpha = 0.77$–0.88) (Rosenberg, 1965). This is the most widely used instrument for the estimation of self-esteem, including studies conducted in Arab and Emirati children (Abu-Sad, 1999; Afari et al., 2012). Each item of the scale is measured on a four-point Likert scale. A higher total score indicates positive self-esteem. We defined low self-esteem as the lowest quintile of the distribution (McClure et al., 2010).

Statistical analyses

Descriptive statistics was used to examine the frequency of physical abuse, emotional abuse and neglect. Prevalence estimates of each of the maltreatment categories were reported as 95% confidence intervals. Chi-square tests were used in bivariate analyses to compare differences in proportions of socio-demographic and clinical variables. Stepwise multivariate logistic regression analyses were conducted to determine the independent correlation between sociodemographic and clinical variables and categories of child maltreatment expressed as odds ratio (OR) and 95% confidence intervals. This analysis was used to model dichotomous variables including physical abuse, emotional abuse and neglect by all of the aforementioned sociodemographic and clinical variables to examine the associations between each type of abuse while controlling for possible confounders. All statistical tests were two-tailed, and significance was set at $p \leq 0.05$. Statistical analyses were conducted by using STATA (version 13).

Results

Sociodemographic characteristics

Six hundred children and adolescents aged 12–18 years were invited to take part in the survey, of whom 518 (86.3%) agreed to participate (Table 1). The sample included 201 boys and 317 girls with a mean age of 14.3 years (±1.3). Most participants (87%) attended private schools. Of the participants, 245 were native Emirates, whereas 200 originated

Table 1. Characteristics of the study adolescents and their families.

Variables	All	Males	Females	*p* value
N. Participants	518	201 (38.8)	317 (61.2)	
Age, mean years (SD)	14.3 ± 1.3	14.3 ± 1.8	14 ± 1.2	0.980
Nationality, %				
Emirati	245	93 (38.0)	152 (62.0)	0.390
Arab	201	85 (42.3)	116 (57.7)	
South Asian	24	8 (33.3)	16 (66.7)	
Westerners	47	14 (29.8)	33 (70.2)	
Daily screen time, %				
<1 h	69	42 (60.9)	27 (39.1))	<0.001*
1–2 h	98	47 (48.0)	51 (52.0)	
>2 h	351	112 (31.9)	239 (68.1)	
Ever smoked cigarettes, %	62	43 (69.4)	19 (30.6)	<0.001*
Monthly allowance (AED) %				
No monthly allowance				
<500	221	90 (40.7)	131 (59.3)	0.008*
500–1000	168	75 (44.6)	93 (55.4)	
>1000	123	33 (26.8)	90 (73.2)	
Parents marital status, %				
Married	488	193 (39.5)	295 (60.5)	0.301
Divorced	19	5 (26.3)	14 (73.7)	
Widowed	9	2 (22.2)	7 (77.8)	
Polygamy, %				
Monogamous	480	186 (38.7)	294 (61.3)	0.980
Polygamous	36	14 (38.9)	22 (61.1)	
Education of mother, %				
No formal education	45	24 (53.3)	21 (46.7)	0.134
Secondary	107	39 (36.4)	68 (63.6)	
College/University	315	123 (39.1)	192 (60.9)	
Family size, %				
1–5	157	60 (38.2)	97 (61.8)	0.786
6–10	322	128 (39.7)	194 (60.3)	
>10	38	13 (34.2)	25 (65.8)	
Monthly family income (AED), %				
<10 000	79	33 (41.8)	46 (58.2)	0.318
10 000–50 000	210	93 (44.3)	117 (55.7)	
>50 000	115	41 (35.6)	74 (64.4)	
History of a disease that required medication				
Asthma	23	10 (43.5)	13 (56.5)	<0.001*
Anaemia	21	19 (90.5)	2 (9.5)	
Allergy	14	11 (78.6)	3 (21.4)	
Acne on face	13	4 (30.8)	9 (69.2)	
Other	11	6 (54.6)	5 (45.4)	
Rozenberg self-esteem scale score, %				
Lowest tertile	76	21 (27.6)	55 (72.4)	0.094
Middle tertile	201	83 (41.3)	118 (58.7)	
Highest tertile	241	97 (40.2)	144 (59.8)	
Physical abuse				
No	452	165 (36.5)	287 (63.5)	0.007*
Yes	65	35 (53.8)	30 (46.2)	
Emotional abuse				
No	338	124 (36.7)	214 (63.3)	0.301
Yes	174	72 (41.4)	102 (58.6)	
Neglect				
No	451	182 (40.4)	269 (59.6)	0.05*
Yes	62	17 (27.4)	45 (72.6)	
Beck Depression Inventory score				
No (<14)	429	173 (40.3)	256 (59.7)	0.401
Mild (14–19)	47	15 (31.9)	32 (68.1)	
Moderate (20–28)	29	10 (34.5)	19 (65.5)	
Severe (29–63)	13	3 (23.1)	10 (76.9)	

AED: United Arab Emirates Dirhams.
*Indicates statistical significance.

from Arab counties, 47 from Western countries and 24 from South Asian countries. Approximately 62% of children belonged to a family of 6–10 members, their parents were married and in a monogamous relationship in 94% of cases. The income of the participants' families was ≥10 000 AED (US$2700/£21860) in 80% of participants, whereas 28% of this group had an income >50 000 AED (US$13600/£10900). Around 20% of the families earned a monthly income below 10 000 AED. Participants who received less than 500 AED were 43%, 33% received 500–1000 AED and the remaining cases >1000. A higher proportion of female vs. male participants received a monthly income ($p = 0.008$). The difference was more pronounced for >1000 AED (US$272/£208) (73.2 vs. 26.8%). Only about 10% of the mothers of the participants had no formal education, while 23% held secondary education degrees and 67% college or higher education certificates. A higher proportion of participants (68%) spent longer than 2 h on screen. There was a difference between males and females ($p < 0.001$). The zenith was that 68.1% of females spent ≥2 h of screen time compared to males (31.9%). Although only 62 participants had smoked tobacco in their lifetime, 69.4% were males ($p < 0.001$).

A substantial proportion of study participants (15.8%; $n = 82$) reported to regularly use medications to treat a medical condition with differences in the frequencies between males and females ($p < 0.001$). Conditions included asthma ($n = 23$), anaemia ($n = 21$), allergy ($n = 14$), facial acne ($n = 13$), glucose 6 phosphate dehydrogenases deficiency ($n = 3$), cardiovascular disease risk factors such as high blood pressure/cholesterol ($n = 3$), diabetes ($n = 2$), lactose intolerance ($n = 1$), vitamin D deficiency ($n = 1$) and joint pain ($n = 1$).

Prevalence of maltreatment and relationship to self-esteem and depressive symptoms

Overall figures of maltreatment in the past year among the study participants (Table 1) were 33.9% for emotional abuse (95% CI: 29.9–38.2), 12.6% for physical abuse (95% CI: 9.9–15.7), and 12.1% for neglect (95% CI: 9.5–15.2). A higher proportion of males reported physical abuse ($p = 0.007$) whilst a higher proportion of females reported being neglected ($p = 0.05$). Only 15% of the participants scored in the lowest tertile of the Rozenberg Self-esteem scale, while 83% reported a score <14 on the Beck Depression Inventory.

Table 2 shows the results of the bivariate analysis investigating the categories of child maltreatment in relation to socio-demographics and clinical variables. The analysis showed a significant relationship between physical abuse, male sex ($p = 0.007$) and lower level of maternal education ($p = 0.05$). Emotional abuse was

Table 2. Bivariate analyses of child maltreatment.

		Physical abuse		Emotional abuse		Neglect	
Variables	All	*n* (%)	*p* value	*n* (%)	*p* value	*n* (%)	*p* value
Sex							
Males	200	35 (17.5)	0.007*	72 (36.7)	0.301	17 (8.5)	0.040*
Females	317	30 (9.5)		102 (32.3)		45 (14.3)	
Age, years							
12–13	207	31 (14.9)	0.369	71 (34.9)	0.328	27 (13.1)	0.830
14–15	162	19 (11.7)		60 (37.0)		19 (11.7)	
≥16	148	15 (10.1)		43 (29.2)		16 (11.0)	
Nationality, %							
Emirati	245	30 (12.3)	0.931	89 (36.4)	0.521	30 (12.4)	0.145
Arab	200	24 (12.0)		63 (31.7)		19 (9.5)	
South Asian	24	4 (16.7)		8 (33.3)		6 (25.0)	
Westerners	47	6 (12.8)		13 (27.7)		7 (14.9)	
Screen time in a day, %							
<1 h	69	8 (11.6)	0.953	19 (27.9)	0.030*	6 (8.8)	0.341
1–2 h	98	12 (12.2)		24 (24.7)		9 (9.2)	
>2 h	350	45 (12.9)		131 (37.7)		47 (13.5)	
Ever-smoked cigarettes, %							
No	450	56 (12.4)	0.646	143 (32.1)	0.022*	53 (11.9)	0.553
Yes	62	9 (14.5)		29 (46.8)		9 (14.5)	
Monthly allowance (AED), %							
No monthly allowance	123	19 (15.4)	0.282	46 (36.9)	0.717	20 (16.3)	0.345
<500	220	27 (12.3)		73 (33.6)		24 (10.9)	
500–1000	122	16 (13.1)		37 (30.8)		11 (9.2)	
>1000	46	2 (4.3)		17 (36.9)		5 (11.4)	
Parents marital status, %							
Married	487	63 (12.9)	0.369	164 (34.0)	0.855	57 (11.8)	0.296
Divorced/widowed	28	2 (7.1)		10 (35.7)		5 (18.5)	
Polygamy							
Monogamous	479	58 (12.1)	0.424	159 (33.5)	0.431	55 (11.5)	0.325
Polygamous	36	6 (16.7)		14 (40.0)		6 (17.1)	
Education of mother							
No formal education	45	11 (24.4)	0.050*	19 (43.2)	0.155	7 (15.6)	0.648
Up to secondary	107	13 (12.1)		45 (42.4)		14 (13.1)	
College/University	314	36 (11.5)		104 (33.4)		34 (10.9)	
Monthly family income (AED), %							
<10 000	79	10 (12.6)	0.267	26 (33.3)	0.384	11 (13.9)	0.254
10 000–50 000	209	29 (13.8)		63 (30.4)		20 (9.7)	
>50 000	115	9 (7.8)		43 (38.1)		18 (15.6)	
Regular use of medication							
No	436	51 (11.7)	0.180	145 (33.6)	0.707	50 (11.6)	0.412
Yes	82	14 (17.1)		29 (35.8)		12 (14.8)	
Rozenberg self-esteem scale score, %							
Lowest tertile	76	11 (14.5)	0.244	38 (50.0)	<0.001*	21 (28.0)	<0.001*
Middle tertile	200	30 (15.0)		72 (36.7)		32 (16.1)	
Highest tertile	241	24 (9.9)		64 (26.7)		9 (3.8)	
Presence of depressive symptoms							
No	428	49 (11.4)	0.091	127 (29.9)	<0.001*	37 (8.7)	<0.001*
Yes	89	16 (17.9)		47 (53.4)		25 (28.7)	

AED: United Arab Emirates Dirhams.
*Indicates statistical significance.

associated with longer time spent on screen ($p = 0.03$) and cigarette smoking ($p = 0.02$). Emotional abuse and neglect were associated with lower self-esteem scores and the presence of depressive symptoms (both $p < 0.001$).

Table 3 shows the results of the multivariable logistic regression analysis which controlled for confounders. Being of male sex was a positive predictor of physical abuse (OR: 2.12; 95% CI: 1.18–3.77), while higher maternal level of education (college or higher) was protective against it (OR: 0.40; 95% CI: 0.19–0.86). Screen time for longer than 2 h a day (OR: 2.77; 95% CI: 1.17–6.56) and history of smoking cigarettes (OR: 1.86; 95% CI: 1.09–3.18) were predictors of emotional abuse. Adolescents who experienced emotional abuse were less likely to report high self-esteem (highest tertile OR: 0.36; 95% CI: 0.21–0.62 and middle tertile OR: 0.58; 95% CI: 0.34–0.99) and more likely to report depressive symptoms (OR: 2.68; 95% CI: 1.68–4.28). Experience of self-neglect was also were less frequently associated with high self-esteem scores (middle tertile OR: 0.49; 95% CI: 0.26–0.92 and highest tertile OR: 0.10; 95% CI: 0.04–0.23), and more frequently with depressive symptoms (OR: 4.24; 95% CI: 2.39–7.52).

Table 3. Multivariate logistic regression analysis of child maltreatment.

Variables	Physical abuse		Emotional abuse		Neglect	
	Adj. OR (95% CI)	*p* value	Adj. OR (95% CI)	*p* value	Adj. OR (95% CI)	*p* value
Sex						
Males	2.12 (1.18–3.77)	0.012*	1.22 (0.83–1.77)	0.301	0.58 (0.31–1.01)	0.063
Females	Reference		Reference		Reference	
Age in years	0.91 (0.76–1.08)	0.255	0.94 (0.84–1.05)	0.252	0.99 (0.85–1.15)	0.902
Nationality, %						
Emirati	0.94 (0.36–2.40)	0.896	2.51 (0.92–6.88)	0.072	0.81 (0.33–1.97)	0.647
Arab	0.91 (0.35–2.37)	0.487	2.04 (0.74–5.63)	0.170	0.59 (23.6–1.52)	0.282
South Asian	1.25 (0.31–4.96)	0.753	2.21 (0.60–7.98)	0.231	1.90 (0.55–6.51)	0.306
Westerners	Reference		Reference		Reference	
Daily screen time, %						
<1 h	Reference		Reference		Reference	
1–2 h	0.58 (0.17–1.89)	0.369	0.85 (0.42–1.71)	0.645	1.04 (0.35–3.08)	0.937
>2 h	1.72 (0.67–4.42)	0.261	2.77 (1.17–6.56)	0.02*	1.62 (0.66–3.95)	0.290
Ever-smoked cigarettes, %						
No	Reference		Reference		Reference	
Yes	1.19 (0.56–2.55)	0.646	1.86 (1.09–3.18)	0.023*	1.26 (0.59–2.69)	0.554
Monthly allowance (AED), %						
No monthly allowance	4.01 (0.89–17.99)	0.069	1.02 (0.50–2.05)	0.958	1.92 (0.87–4.21)	0.102
<500	3.08 (0.70–13.48)	0.135	0.86 (0.44–1.67)	0.667	1.21 (0.57–2.57)	0.614
500–1000	3.32 (0.73–15.05)	0.120	0.76 (0.37–1.55)	0.452	1.27 (0.41–3.88)	0.675
>1000	Reference		Reference		Reference	
Parents marital status, %						
Married	Reference		Reference		Reference	
Divorced/widowed	0.51 (0.11–2.23)	0.378	1.08 (0.48–2.38)	0.855	1.70 (0.62–4.67)	0.302
Polygamy						
Monogamous	Ref.		Ref.		ef.	
Polygamous	1.45 (0.57–3.64)	0.426	1.32 (0.65–2.67)	0.432	1.58 (0.62–3.98)	0.329
Education of mother						
No formal education	Reference		Reference		Reference	
Up to secondary	0.42 (0.17–1.04)	0.062	0.97 (0.47–1.97)	0.934	0.82 (0.30–2.18)	0.687
College/University	0.40 (0.19–0.86)	0.019*	0.66 (0.34–1.25)	0.206	0.66 (0.27–1.61)	0.367
Family income (AED), %						
<10000	Reference		Reference		Reference	
10 000–50 000	1.11 (0.51–2.40)	0.788	0.87 (0.50–1.53)	0.638	0.66 (0.30–1.45)	0.302
>50 000	0.58 (0.22–1.52)	0.270	1.23 (0.67–2.25)	0.505	1.15 (0.51–2.58)	0.740
Regular use of medication						
No	Reference		Reference		Reference	
Yes	1.59 (0.83–3.05)	0.158	1.11 (0.67–1.83)	0.672	1.33 (0.68–2.63)	0.407
Rozenberg self-esteem scale score, %						
Lowest tertile	Reference		Reference		Reference	
Middle tertile	1.04 (0.49–2.20)	0.913	0.58 (0.34–0.99)	0.047*	0.49 (0.26–0.92)	0.028*
Highest tertile	0.65 (0.30–1.40)	0.276	0.36 (0.21–0.62)	<0.001*	0.10 (0.04–0.23)	<0.001*
Presence of depressive symptoms						
No	Reference		Reference		Reference	
Yes	1.69 (0.91–3.14)	0.094	2.68 (1.68–4.28)	<0.001*	4.24 (2.39–7.52)	<0.001*

AED: United Arab Emirates Dirhams.
*Indicates statistical significance.

Discussion

The aim of the present cross-sectional survey was to ascertain the prevalence of maltreatment of children in the previous 12 months in Al Ain in the Emirate of Abu Dhabi, UAE. To our knowledge, this study the first one to investigate child maltreatment in relation to socio-demographic variables and the presence of depressive symptoms and low self-esteem to generate useful predictors to plan interventions.

Emotional abuse was the most common form of maltreatment (33.9%), followed by physical maltreatment (12.6%), both more frequent in males. Experience of neglect, more frequent in females, was the least common form of maltreatment (12.1%). Respondents who experienced emotional abuse and neglect reported significant symptoms of depression and lower self-esteem. Participants who experienced emotional abuse reported longer than two hours of screen time every day and smoked tobacco more frequently. The prevalence of physical maltreatment was higher in households with the lowest levels of maternal education, while higher maternal education was a protective factor against physical abuse.

There is no publicly available official statistics in the UAE describing the incidence and prevalence of child maltreatment and of the different forms of child abuse. Some data available in the literature suggests that the number of children abused in the UAE is small, although on the rise. A recent report indicates that in the UAE, maids were the perpetrator in 40%

of child abuse cases while relatives were implicated in another 45%. According to this source, cases mostly affected UAE nationals (Sachdeva, 2019).

The cases identified in this study were self-reported, and it was not possible for the study team to verify whether the cases were known to child welfare agencies or to the police. This information could have helped us to understand the local context in more details. It is plausible that the perception of self-reported maltreatment may differ between what the individual and/or their families regard as maltreatment and the official definition of abuse. Furthermore, willingness to self-report maltreatment might have been influenced by fear of prosecution, of losing income for the family, potential peer pressure of extended family and friends and socio-cultural issues. This might translate into potential disagreement between self-reported measures and number of officially reported cases. Nevertheless, the most important element in children welfare is to establish tools that help identify those at potential risk of serious negative outcomes to intervene as early as possible. In this context, self-report measures from outside the UAE, have shown to provide an extra 40% of added sensitivity to the detection of cases of abuse compared to officially recorded cases, particularly those with the poorest outcome (Al Midfa et al., 2019). Some evidence in the UAE suggests that up to 90% of child abuse cases are not reported, especially those occurring in Arab families (Sachdeva, 2019). Hence it appears that there is great value in being able to use self-reported tools in the UAE to identify as many cases of maltreatment as possible.

We found that males were more prone to experience emotional and physical abuse, whereas girls reported more commonly neglect. The prevalence of physical maltreatment identified in this study for males and females (17.5 vs. 9.5%) approximate to those reported in Europe with a median prevalence of 27.0% for males and 12.0% for females (Moody et al., 2018). Our figures regarding the prevalence of emotional maltreatment in males (36.7%) and females (32.2%) are closer to median self-reported prevalence rates of emotional abuse in Asia with 33.2% in males and 26.9% in females rather than Africa (31.8 vs. 30.5% respectively), North America (28.4% for females and 13.8% for males) or Europe (12.9% for females and 6.2% for males). Prevalence of neglect detected in our survey in boys (14.3%) and girls (8.5%) were of a similar magnitude of European studies (13.9 and 14.8%, respectively), although the distribution of sexes was similar to median rates of self-reported neglect detected in Africa (41.8% for females and 39.1% for males) and in North America (40.5% for females and 16.6% for males) (Moody et al., 2018).

Those who experienced more pronounced emotional abuse and neglect in this study, also reported significant symptoms of depression and low self-esteem. There is an established relationship between child abuse, low self-esteem, symptoms of depression, anxiety and stress. Longitudinal studies suggest that the direction of the relationship is such that low self-esteem is primarily linked with child abuse and is a risk factor for depression and anxiety (Celia and Odac, 2020; Shah et al., 2020). A recent study evaluating the mediating role of self-esteem in the association between child maltreatment and depressive symptomatology showed that whilst physical neglect is directly associated with depressive symptomatology, self-esteem may be a powerful mediator between emotional abuse and depressive symptomatology in emotionally abused children (Yoon et al., 2019).

We live in an age where on screen technology is readily available to freely access information and entertainment including videogames. We found that screen exposure longer than two hours every day was more common in those participants reporting emotional mistreatment. Similarly, emotional distress was associated with tobacco smoking. One possible interpretation of this finding is that in case of emotional difficulties, readily available gratifying on-screen experiences might provide a powerful self-rewarding experience, consistent with the established link between emotional maltreatment and addictive behaviours (Taillieu et al., 2016). Other possible reasons for spending so much time on screen in the UAE might be related to the limited availability of public playgrounds/sport for kids and youth in residential communities, and the hot climate especially during the summer. The use of tobacco is very diffuse in Arab countries of Muslim faith, readily available and culturally accepted in the UAE, differently from other substances of dependence such as alcohol (Maziak et al., 2014).

Low level of maternal education (less than 10 years) is a recognised risk factor for physical child maltreatment (Cadzow et al., 1999). Hence, it is not surprising that the prevalence of physical maltreatment in our sample was higher in households with the lowest level of maternal education, whereas maternal education was protective against experiencing physical abuse. Culturally, maids and older siblings play an important role in supervising and raising the children of UAE

nationals and other Arab families, whereas fathers are often decision makers and role models in the family context.

Despite being a relatively newly formed country, the UAE has created a fairly robust mechanism to facilitate reporting of cases when child abuse is suspected. The system has inbuilt child protection in the law, which relies on individuals contacting the authorities to report cases of suspected abuse (Ministry of Interior Child Protection Centre (MoI), n.d.). Although awareness of child maltreatment is increasing, it is essential that federal and local branches of the government cooperate closely with the community to maximise the chance of successful reporting. As there may be a historical cultural reticence in reporting cases of suspected child maltreatment to the authorities, self-reporting at schools, health care facilities and other child friendly environments, might be a way forward to increase public awareness and the chance of detecting any forms of maltreatment. In parallel epidemiological work to understand the extent of the problem and to identify risk factors with more precision are essential to develop effective interventions.

Limitations for this study include the inability to investigate abuse of sexual nature and self-harm preventing us from commenting on the frequency of these problems. Another issue is related to not being able to report on the proportion of self-reported cases of maltreatment known to the authorities. This information would have provided important details on the sensitivity, specificity, positive and negative predictive power of our approach in relation to reported cases, offer a potential indirect measure of the level of under-reporting, and support individuals whose stories of maltreatment had not been reported before. Additionally, there is an intrinsic risk of recall bias in all retrospective cross-sectional surveys. In this study the information collected pertained to the previous 12 months and could have been subject to memory distortion. Intrinsic to self-reporting, some of the participants might have not disclosed a history of maltreatment for reasons related to fear, embarrassment, or discomfort. A recent meta-analysis of prospective and retrospective measures of childhood maltreatment, suggested limited overlap between these approaches in relation to the frequency of reporting of specific forms of abuse and neglect. Nevertheless, the study supports the notion that retrospective reports might be more suitable to capture a higher prevalence of child maltreatment versus prospective measures holding to greater sensitivity than prospective measures (Baldwin et al., 2019). Interestingly, the prevalence rates detected in this study are similar to those measured globally, suggesting that the approach used in our study might be the most appropriate at present considering the local societal context.

It is noteworthy that respondents of different ages might have processed the maltreatment questions differently based on different levels of awareness and understanding. Nevertheless, the analysis of age effects did not have any statistically significant influence on the results. We included respondents from different nationalities and cultures. There may be inter-cultural differences in the way maltreatment is interpreted and addressed (Davies and Ward, 2012). The perception of maltreatment and the willingness to report it may also differ from one social group to another (Al-Mahroos, 2007). Our statistical analysis, however, did not show any significant difference among various nationalities. We focussed on children and adolescents of schooling age to ascertain the prevalence of maltreatment. There may be other routes to child maltreatment which are not channelled into the education system in the UAE and were therefore not acknowledged in this study (ECPAT data, n.d.). Although this work may not be generalisable to the whole UAE, with all the limitations and the difficulties in carrying out research in mood disorders (Wise et al., 2016), to our knowledge this is the first cross sectional survey carried out in the UAE to systematically detect the prevalence of maltreatment in children and adolescents in the emirate of Abu Dhabi.

We used a stepwise logistic regression analysis, and only included in the multi-regression analyses, the limited number of variables which survived statistical threshold in our initial univariate approach. In this way, we reduced the occurrence of type I error typical of stepwise logistic regression analyses without using Bonferroni as a way to correct for multiple comparisons, hence avoiding a power reduction in the context of a relatively small sample. We appreciate that this may not be the only approach to this type of analyses, although it would seem appropriate in the context of a priori hypothesis which favours an association between the occurrence of childhood maltreatment and symptoms of depression.

In conclusion, findings from this survey suggest that the prevalence of self-reported maltreatment among children in Al Ain is of a similar magnitude of what observed in the rest of the world. Based on this information, questionnaires could be routinely used in schools in the Abu Dhabi region to identify

children and adolescents at risk of maltreatment, and support could be offered at the earliest convenience to vulnerable individuals. Assessment of self-esteem and of depressive symptomatology might aid early detection of psychological decompensation to prevent deterioration and the possible development of mental disorders and protect those at risk. Monitoring the use of substances like tobacco smoking and investigating the length of time children spend on screen, could be used as a proxy for further investigation into the possibility of psychological wellness. An educational campaign targeting parents and close family members of children and adolescents attending schools in Abu Dhabi could provide vital information regarding the prevalence of child maltreatment and offer information about culturally sensitive local resources able to provide help to those in need.

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Ethics approval and consent to participate

Ethical approval was obtained from the Al Ain Medical District Human Research Ethics Committee (AAMDHREC 10/18). Signed informed consent was obtained from each participant.

Article summary

This is the first report from the UAE confirming that the prevalence of self-reported child maltreatment is of a similar magnitude to other countries around the world.

Author contributions

Professor Syed M. Shah substantially contributed by developing the conceptual framework and design of the study, data management and analysis and interpretation of the data, and critically revising the results. Drs Gul Nowshad, Fatima Al Dhaheri, Mariam H. Al-Shamsi, Alfan M. Al-Ketbi, Alaa Galadari, Priyam Joshi, Heba Bendak and Professor Michal Grivna made important contributions to conceptualisation, interpretation of the data and in critically revising the article. Danilo Arnone made essential contributions to the interpretation of data and to the different stages of the write up process. All authors read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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Data availability statement

The data sets analysed in the study can be requested by contacting the authors. The United Arab Emirates University Human Research Committee does not allow the public release of raw data via public databases.

References

Abu Dhabi Statistics Centre, Abu Dhabi. n.d. The population of Abu Dhabi Emirates. https://www.scad.gov.abudhabi/Release%20Documents/Statistical%20Yearbook%20of%20Abu%20Dhabi-2017-EN-1May%2018.PDF

Abu-Sad, I. (1999). Self-esteem among Arab adolescents in Israel. *Journal of Social Psychology*, *139*, 479–486. https://doi.org/10.1080/00224549909598407

Afari, E., Ward, G., & Khine, M. S. (2012). Global self-esteem and self-efficacy correlates: relation of academic achievement and self-esteem among Emirati students. *International Education Studies*, *5*(2), 49–57. https://doi.org/10.5539/ies.v5n2p49

Al Abdouli, A., Al Fageer, R., Al Kaabi, A., & Sharif, E. F. (2017). Child abuse experience in Al Ain District, United Arab Emirates. *EC Paediatrics*, *6*(2), 35–39.

Al Hajeri, H., Al Halabi, M., Kowash, M., Khamis, A. H., Welbury, R., & Hussein, I. (2018). Assessment of the knowledge of United Arab Emirates dentists of Child Maltreatment, protection, and safeguarding. *European Journal of Paediatric Dentistry*, *19*(2), 105–118.

Al Midfa, A., Al Farsi, B., Bakry, E., Jawad, A., Saleheen, H., Al Muneef, M., & Al Eissa, M. (2019). Child maltreatment prevention readiness in United Arab Emirates. *Children and Youth Services Review 2019*, *100*(C), 70–75. https://doi.org/10.1016/j.childyouth.2019.02.023

Alansar, B. M. (2006). Internal consistency of an Arabic adaptation of the Beck Depression Inventory-II with college students in eighteen Arab countries. *Social Behaviour and Personality*, *34*(4), 425–430. https://doi.org/10.2224/sbp.2006.34.4.425

Al-Mahroos, F. T. (2007). Child abuse and neglect in the Arab Peninsula. *Saudi Medical Journal*, *28*(2), 241–248.

Alshareef, N., Hussein, H., Al Faisal, E., El Sawaf, A., Wasfy, A., AlBehandy, N. S., & Altheeb, A. A. S. (2005).

Person, place and time characteristics of physical violence among adolescents in Dubai, UAE. *International Journal of Preventive Medicine*, *1*(4), 173–178.

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders*. 5th edn. American Psychiatric Association.

Bair-Merrit, M., Zuckerman, B., Augustyn, M., & Cronholm, P. F. (2013). Silent victims-an epidemic of childhood exposure to domestic violence. *The New England Journal of Medicine*, *369*(18), 1673–1675. https://doi.org/10.1056/NEJMp1307643

Baldwin, J. R., Reuben, A., Newbury, J. B., & Danese, A. (2019). Agreement between prospective and retrospective measures of childhood maltreatment: A systematic review and meta-analysis. *JAMA Psychiatry*, *76*(6), 584–593. https://doi.org/10.1001/jamapsychiatry.2019.0097

Beck, A., Brown, G., & Steer, R. (1996). *Beck depression inventory-II (BDI-II)*. The Psychological Corporation.

Cadzow, S. P., Armstrong, K. L., & Fraser, J. A. (1999). Stressed parents with infants: reassessing physical abuse risk factors. *Child Abuse & Neglect*, *23*(9), 845–853. https://doi.org/10.1016/S0145-2134(99)00063-0

Celia, B. C., & Odac, H. (2020). Does child abuse have an impact on self-esteem, depression, anxiety, and stress conditions of individuals? *International Journal of Social Psychiatry*, *66*(2), 171–178.

Chandan, J. S., Okoth, K., Gokhale, K. M., Bandyopadhyay, S., Taylor, J., & Nirantharakumar, K. (2020). Increased cardiometabolic and mortality risk following childhood maltreatment in the United Kingdom. *Journal of the American Heart Association*, *9*(10), e015855. https://doi.org/10.1161/JAHA.119.015855

Chandan, J. S., Thomas, T., Gokhale, K. M., Bandyopadhyay, S., Taylor, J., & Nirantharakumar, K. (2019). The burden of mental ill health associated with childhood maltreatment in the UK, using The Health Improvement Network database: a population-based retrospective cohort study. *The Lancet Psychiatry*, *6*(11), 926–934. https://doi.org/10.1016/S2215-0366(19)30369-4

Davies, C., & Ward, H. (2012). *Safeguarding children across services: Messages from research*. Jessica Kingsley Publishers.

Degli Esposti, M., Pinto Pereira, S. M., Humphreys, D. K., Sale, R. D., & Bowes, L. (2020). Child maltreatment and the risk of antisocial behavior: A population-based cohort study spanning 50 years. *Child Abuse & Neglect* , *99*, 104281. https://doi.org/10.1016/j.chiabu.2019.104281

ECPAT data n.d. International regional overview: sexual exploitation of children in MENA region: https://www.ecpat.org/wp-content/uploads/2020/05/Regional-Overview-Sexual-Exploitation-of-Children-in-the-Middle-East-and-North-Africa-ECPAT-research.pdf.

Edwards, V. J., Holden, G. W., Felitti, V. J., & Anda, R. F. (2003). Relationship between multiple forms of childhood maltreatment and adult mental health in community respondents: Results from the Adverse Childhood Experiences Study. *American Journal of Psychiatry*, *160*(8), 1453–1460. https://doi.org/10.1176/appi.ajp.160.8.1453

Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson, S. A. (2009). Burden and consequences of child maltreatment in high-income countries. *Lancet (London, England)*, *373*(9657), 68–81. https://doi.org/10.1016/S0140-6736(08)61706-7

Hillis, S., Mercy, J., Amobi, A., & Kress, H. (2016). Global prevalence of past-year violence against children: a systematic review and minimum estimates. *Pediatrics* , *137*(3), e20154079. https://doi.org/10.1542/peds.2015-4079

Ju, S., & Lee, Y. (2018). Developmental trajectories and longitudinal mediation effects of self-esteem, peer attachment, child maltreatment and depression on early adolescents. *Child Abuse & Neglect*, *76*, 353–363. https://doi.org/10.1016/j.chiabu.2017.11.015

Krug, E. G., Mercy, J. A., Dahlberg, L. L., & Zwi, A. B. (2002). The world report on violence and health. *Lancet (London, England)*, *360*(9339), 1083–1088. https://doi.org/10.1016/S0140-6736(02)11133-0

Liu, M., Wu, L., & Ming, Q. (2015). How does physical activity intervention improve self-esteem and self-concept in children and adolescents? Evidence from a meta-analysis. *PLoS One*, *10*(8), e0134804. https://doi.org/10.1371/journal.pone.0134804

Maalouf, F. T., Alamiri, B., Atweh, S., Becker, A. E., Cheour, M., Darwish, H., Ghandour, L. A., Ghuloum, S., Hamze, M., Karam, E., Khoury, B., Khoury, S. J., Mokdad, A., Meho, L. I., Okasha, T., Reed, G. M., Sbaity, E., Zeinoun, P., & Akl, E. A. (2019). Mental health research in the Arab region: challenges and call for action. *The Lancet. Psychiatry*, *6*(11), 961–966. https://doi.org/10.1016/S2215-0366(19)30124-5

MacMillan, H., Fleming, J., Trocme, N., Boyle, M. H., Wong, M., & Racine, Y. A. (1997). Prevalence of child physical, emotional, and sexual abuse in the community. *Jama*, *278*(2), 131–135. https://doi.org/10.1001/jama.1997.03550020063039

Maziak, W., Nakkash, R., Bahelah, R., Husseini, A., Fanous, N., & Eissenberg, T. (2014). Tobacco in the Arab World: old and new epidemics amidst policy paralysis. *Health Policy and Planning*, *29*(6), 784–794. https://doi.org/10.1093/heapol/czt055

McClure, A. C., Tanski, S. E., Kingsbury, J., Gerrard, M., & Sargent, J. D. (2010). Characteristics associated with low self-esteem among U.S. adolescents. *Academic Pediatrics*, *10*(4), 238–244. https://doi.org/10.1016/j.acap.2010.03.007

Ministry of Interior Child Protection Centre (MoI). n.d. United Arab Emirates Government: https://u.ae/en/information-and-services/justice-safety-and-the-law/children-safety

Moody, G., Cannings-John, R., Hood, K., Kemp, A., & Robling, M. (2018). Establishing the international prevalence of self-reported child maltreatment: a systematic review by maltreatment type and gender. *BMC Public Health*, *18*(1), 1164. https://doi.org/10.1186/s12889-018-6044-y

Morris, A. S., Silk, J. S., Steinberg, L., Myers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social Development (Oxford, England)*, *16*(2), 361–388. https://doi.org/10.1111/j.1467-9507.2007.00389.x

Naja, S., Al-Kubaisi, N., Chehab, M., Al-Dahshan, A., Abuhashem, N., & Bougmiza, I. (2019). Psychometric properties of the Arabic version of EPDS and BDI-II as a screening tool for antenatal depression: evidence from

Qatar. *BMJ Open*, *9*(9), e030365. https://doi.org/10.1136/bmjopen-2019-030365

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton University Press.

Sachdeva, B. (2019). Challenges in child protection against child abuse in The UAE (United Arab Emirates). *Acta Scientific Paediatrics*, *2*(7), 41–42. https://doi.org/10.31080/ASPE.2019.02.0100

Shah, S. M., Al Dhaheri, F., Albanna, A., Al Jaberi, N., Al Eissaee, S., Al Shehhi, N. A., Al Shamisi, S. A., Al Hamez, M. M., Abdelrazeq, S. Y., Grivna, M., & Betancourt, T. S. (2020). Self-esteem and other risk factors for depressive symptoms among adolescents in United Arab Emirates. *PLoS One*, *15*(1), e0227483. https://doi.org/10.1371/journal.pone.0227483

Soares, A. L. G., Hammerton, G., Howe, L. D., Rich-Edwards, J., Halligan, S., & Fraser, A. (2020). Sex differences in the association between childhood maltreatment and cardiovascular disease in the UK Biobank. *Heart*, *0*, 1–7.

Taillieu, T. L., Brownridge, D. A., Sareen, J., & Afifi, T. O. (2016). Childhood emotional maltreatment and mental disorders: results from a nationally representative adult sample from the United States. *Child Abuse Negl*, *59*, 1–12. https://doi.org/10.1016/j.chiabu.2016.07.005

Wise, T., Arnone, D., Marwood, L., Zahn, R., Lythe, K. E., & Young, A. H. (2016). Recruiting for research studies using online public advertisements: examples from research in affective disorders. *Neuropsychiatric Disease and Treatment*, *12*, 279–285. https://doi.org/10.2147/NDT.S90941

World Health Organization (WHO). (2020). https://www.who.int/news-room/fact-sheets/detail/child-maltreatment

Yoon, M., Cho, S., & Yoon, D. (2019). Child maltreatment and depressive symptomology among adolescents in out-of-home care: The mediating role of self-esteem. *Children and Youth Services Review*, *101*, 255–260. https://doi.org/10.1016/j.childyouth.2019.04.015

Zuckerman, B., Augustyn, M., Groves, B. M., & Parker, S. (1995). Silent victims revisited: the special case of domestic violence. *Pediatrics*, *96*(3 Pt 1), 511–513.